

## **REMARKS**

Applicants have amended Claims 1, 6 and 7 and cancelled Claims 8-16. Applicants respectfully submit that no new matter has been added by the present amendment. Applicants have also amended the Abstract of Disclosure and herein attach a new abstract page.

### **I. Objection to the Specification**

Applicants have amended the Abstract and submitted a new Abstract page as requested in the Office Action and have amended the Specification to correct the misspelling of "hexane" on page 6. Accordingly, Applicants request withdrawal of the present objections.

### **II. Claims Rejections - 35 U.S.C. § 112**

The Office Action rejects Claim 6 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Specifically, the Office Action states that use of a trademark "Si 69®" in Claim 6 does not comply with the requirements of 35 U.S.C. §112. Applicants have amended Claim 6 and removed the trademark/name "Si 69®" and therefore request withdrawal of this ground of rejection.

### **III. Rejection under 35 U.S.C. §102(b)**

Claims 1-3 and 5-7 were rejected under 35 U.S.C. § 102(b) as being anticipated by Well (U.S. Patent No. 5,905,107). Applicants respectfully traverse this ground of rejection. In order to anticipate a claim, the prior art reference must teach each and every element of the claim, either expressly or inherently. Applicants respectfully submit that Well fails to teach each and every element of the claimed invention.

The present invention is directed to rubber compounds comprising at least one double bond-containing rubber (A) and **polybutadiene rubber gels with a glass transition temperature of <-60°C** (B), whereby component (B) is present in quantities of 10 to 150 wt.%, relative to the total quantity of component (A), and optionally other fillers and rubber auxiliary substances in conventional quantities.

Applicants submit that Well discloses an unvulcanized mixture comprising S-SBR and silicic acid, silanization agent, TBzTD and CBS. See Column 1, lines 48-61. Also according to the disclosure of Well, the unvulcanized rubber mixture can contain polybutadiene (BR). Well does not teach or suggest each and every element of the claimed invention, specifically Well does not teach or suggest component B, i.e. **polybutadiene rubber gels with a glass transition temperature of <-60°C.** Well does not teach using rubber gels having the claimed transition temperature. The Examiner has not advanced any evidence indicating that the BR used in Well anticipates the BR claimed. Further, Applicants draw attention to the Table on page 16 of the Specification illustrating that not all BR have glass transition temperatures within the claimed range. Further, Well does not teach or suggest a BR gel as presently claimed. Accordingly, Applicants submit that Well fails to anticipate the claimed invention and therefore request withdrawal of this ground of rejection.

#### **IV. Rejection Under 35 U.S.C. § 102(b)**

Claims 1-3, 5 and 7 were rejected under 35 U.S.C. § 102(b) as being anticipated by Sandstrom, et al. (U.S. Patent No. 5,534,574). Applicants respectfully traverse this ground of rejection and herein incorporate the arguments above.

Applicants respectfully submit that Sandstrom, et al. fails to teach each and every element of the claimed invention either expressly or inherently. Sandstrom, et al. teaches a rubber composition comprised of an elastomer (at least one diene based elastomer, i.e. SBR and BR), silica, carbon black, polysulfide coupler and a thiazole. Sandstrom, et al. does not disclose either a **BR rubber gel** or a **BR rubber gel having the glass transition temperature as claimed, i.e. <-60°C.**

The Examiner has not advanced any evidence indicating that the BR used in Sandstrom, et al. anticipates the BR claimed. Further, Applicants draw attention to the Table on page 16 of the Specification illustrating that not all BR have glass transition temperatures within the claimed range. Accordingly, Applicants submit that Sandstrom, et al. fails to anticipate the claimed invention and therefore request withdrawal of this ground of rejection.

**V. Rejection under 35 U.S.C. § 103(a)**

Claim 4 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Well or Sandstrom, et al., each individually in view of Wolpers, et al. (EP 530,590). Applicants respectfully traverse this ground of rejection and incorporate the arguments above.

“To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (Fed. Cir. 1974)”. Applicants also respectfully submit that “in order to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference. Second, there must be a reasonable expectation of success. Finally, the prior art references must teach or suggest all the claims limitations. The teachings or suggestions to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicants’ disclosure.” See MPEP § 2142, citing In re Vaeck, 947 F.2d 488, 20 USPQ 2d. 1438 (Fed. Cir. 1991).

Claim 4 is dependent upon Claim 1, therefore if Claim 1 is allowable, Applicants respectfully submit that Claim 4 would be allowable. Applicants submit, as argued above, Well and Sandstrom, et al. fail to teach or suggest the claimed invention, therefore even if there was motivation to combine the teachings of Wolpers, et al., the combination would not teach each and every element of the claimed invention. Accordingly, Applicants submit that one skilled in the art would not arrive at the instant invention in view of Well or Sandstrom, et al., each individually in view of Wolpers, et al., therefore Applicants request withdrawal of this ground of rejection.


**VI. Rejection under 35 U.S.C. § 103(a)**

Claim 6 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Sandstrom, et al. in view of Well and Kondo, et al. (U.S. Patent No. 5,393,816). Applicants respectfully traverse this ground of rejection and incorporate the arguments above.

Claim 6 is dependent upon Claim 1, therefore if Claim 1 is allowable, Applicants respectfully submit that Claim 6 would be allowable. Applicants submit, as argued above, Well and Sandstrom, et al. fail to teach or suggest the claimed invention, therefore even if there was motivation to combine the teachings of Kondo, et al., the combination would not teach each and every element of the claimed invention. Accordingly, Applicants submit that one skilled in the art would not arrive at the instant invention in view of Sandstrom, et al. in view of Well and Kondo, et al., therefore Applicants request withdrawal of this ground of rejection.

Respectfully submitted,

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GEL-CONTAINING RUBBER COMPOUNDS  
FOR TIRE COMPONENTS SUBJECTED TO DYNAMIC STRESS

ABSTRACT OF THE DISCLOSURE

The present invention concerns rubber compounds containing at least one double bond-containing rubber and additions of polybutadiene rubber particles having a glass transition temperature  $< -60^{\circ}\text{C}$  together with vulcanizates and rubber moldings manufactured therefrom. The rubber compounds according to the present invention are characterized in the uncrosslinked state by good processability and adequate scorch resistance and in the vulcanized state by high Shore A hardness, high impact resistance, low hysteresis losses and heat-build-up under dynamic stress, together with a low specific density. The vulcanizates are particularly suitable for the manufacture of tire components for which low heat-build-up under dynamic stress is required, e.g. for tire bead and apex compounds, subread compounds, tire carcasses and for tire sidewalls. The compounds are particularly suitable for the manufacture of reinforced sidewalls for tires with emergency running properties (inserts for run-flat tires).